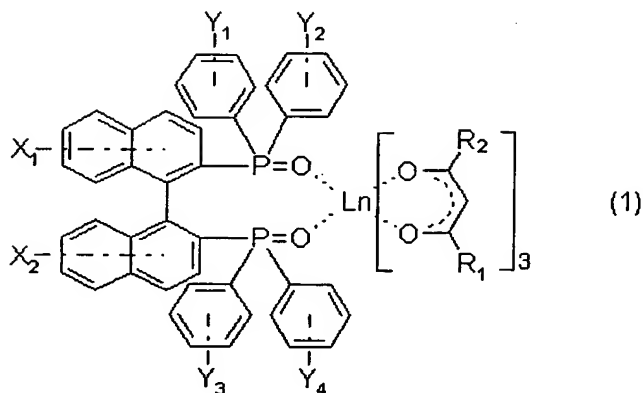


## CLAIMS

1. An optically active rare earth complex represented by a general formula (1):



(in the formula (1),  $X_1$  and  $X_2$  each independently represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 4 carbon atoms or alkoxy group having 1 to 4 carbon atoms;  $Y_1$ ,  $Y_2$ ,  $Y_3$ , and  $Y_4$ , each independently represents a hydrogen atom, a halogen atom, or an alkyl group having 1 to 4 carbon atoms;  $R_1$  represents an alkyl group having 1 to 8 carbon atoms, a fluorine-substituted alkyl group having 1 to 8 carbon atoms, or a phenyl group; and  $R_2$  is a group selected from the group consisting of;

(a) a cyclopentadienyl group (one  $\text{CH}_2$  group existing in the cyclopentadienyl group may be replaced by  $-\text{O}-$  or  $-\text{S}-$ ),

(b) a phenyl group (one or two  $\text{CH}$  groups existing in the phenyl group may be replaced by  $\text{N}$ ), and

(c) a naphthyl group (one or two  $\text{CH}$  groups existing in the naphthyl group may be replaced by  $\text{N}$ ), and

the groups included in (a), (b), and (c) may be substituted with an alkyl group or a halogen atom; and  $\text{Ln}$  represents a rare earth metal atom).

2. The optically active rare earth complex according to claim 1, wherein  $X_1$  and  $X_2$  in the general formula (1) are hydrogen atoms.

3. The optically active rare earth complex according to claim 1, wherein  $Y_1$ ,  $Y_2$ ,  $Y_3$ , and  $Y_4$  in the general formula (1) are hydrogen atoms.
4. The optically active rare earth complex according to claim 1, wherein  $Ln$  in the general formula (1) is one of Eu and Yb.
5. The optically active rare earth complex according to claim 1, wherein  $R_1$  in the general formula (1) is a trifluoromethyl group.
6. The optically active rare earth complex according to claim 1, wherein  $R_2$  in the general formula (1) is a thienyl group.
7. The optically active rare earth complex according to claim 1, wherein an optical purity of the compound represented by the general formula (1) is 70%ee or more.
8. The optically active rare earth complex according to claim 1, wherein an optical purity of the compound represented by the general formula (1) is 90%ee or more.